Sourav Dokania

sourav.dokania25@mail.com | *LinkedIN* | *GitHub*

Research Interests

Embedded Sensors, Wireless Systems, Networking and Internet of Things (IoT)

Education

Jadavpur University, Kolkata (July 2014 – June 2018)
B.E. Instrumentation and Electronics Engineering Department *CGPA : 8.41/10*

Relevant Courses

Electronic Circuits – I & II, Digital Electronics, Linear Control Systems, Analog Integrated Circuit, Data Structures & OOP, Microprocessors & Microcontrollers, Computer organization and Networking

Technical Skills

Programming Languages: C, C++, Python, HTML/CSS/JS, PHP, VBA, Lua
Software Tools: LabVIEW, Cadence Allegro, TestStand

Professional Experience

Texas Instruments, India (June 2018 – Present)
Analog Engineer

Bit Error Rate (BER) measurement board for RS485
- Built the BER board for RS485 transceivers for Electrical Fast Transient (EFT) class certification
- Used TI's C2000 microcontrollers for calculating received bit error asynchronously

RS485 and LIN - Automated assembly test solution in TI Malaysia
- Built and deployed software for automated assembly test solution of RS485 and Local Interconnect Network(LIN) transceivers
- Collaborated with TI Malaysia team for debug, gained hands-on experience on assembly software and hardware tools

CAN - Advanced multi-temperature wafer probing solution in TI China
- Built and deployed automated multi-temperature test solutions for Controller Area Network (CAN) transceiver wafer probing solution
- Worked on advanced software and hardware tools used in multi-insertion wafer probing

Semiconductor Quality Control and Compliance testing hardware
- Designed Quality Control hardware for HAST (Highly Accelerated Stress Testing) and HTOL (High Temperature Operating Life) for catching early life failures and guarantee the minimum lifetime of IC operation

Internship

Texas Instruments, India (May 2017 – July 2017)
Summer Internship

Portable and Isolated CAN network protocol analyzer
- Built the multi-nodal CAN network protocol analyzer with integrated wake-time measurement unit
- Developed the LabVIEW interface for test and control using UART

LIN - Relay Matrix for device characterization
- Created the Control and Interface built using I2C and LabVIEW

Research Projects

Vision Guided Auto-Lander for a Quadcopter (Sep 2016 - Mar 2018)

- Worked under the guidance of Dr. Amitava Gupta, Director of the School of Nuclear Studies and Applications, Jadavpur University
- Built an autonomous flying rover with on-board image processor and auto landing algorithm
- Project selected by the Indian Space Research Organization
- Awarded the Technical Education Quality Improvement Programme Grant

Wearable Piezoelectric Current Measurement Interface (Aug 2017 - Dec 2017)

- Final Year Thesis project, completed under the guidance of Prof. Bipan Tudu
- Built the interface for picoAmpere current measurement using Keithley 6485 Picoammeter, NI TC08 and LabVIEW

Energy Conservation System by Decentralized Air-Conditioner Control (May 2016 - Mar 2017)

- Built and tested the prototype for energy conservation system for large spaces
- Used passive infrared sensor array, digital visitor counter and RF modules
- Qualified for the quarterfinal stage of India Innovation Challenge, Design Contest - 2016

MQTT based Power Saving Home Automation Solution (June 2017 - Apr 2018)

- Built a low latency IoT based electrical appliance controller and energy saver for home-automation
- Employed WiFi enabled microcontroller, optoisolator-traic switches using MQTT protocol

Awards and Recognitions

Academic Achievements

- Ranked in the top 1% on All India Entrance Examination, WBJEE-2014
- Won several inter-college robotic tournaments and coding competitions
- Co-founded the Jadavpur University Science Club in the JU Salt Lake Campus(a knowledge sharing hub for robotics and embedded electronics projects)

TI Global Silver Recognition Award - 2018 & 2019

- In 2018 for excellent contributions directly impacting TI's success
- In 2019 for urgent customer support, quick execution and exceeding expectations thereby winning TI business

Hobbies

Traveling, Reading, Badminton, Table Tennis, Swimming, Skateboarding